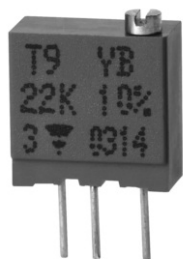


3/8" Square Multi-Turn Fully Sealed Container Cermet Trimmers



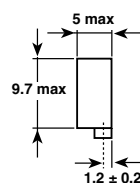
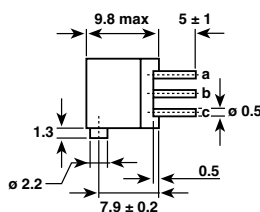
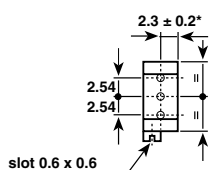
FEATURES

- Military and Professional Grade
- 0.5 W at 70 °C
- CECC 41 101-004 (A, B, C, D, E)
- Tests according to CECC 41 000
- GAM T1
- Fully sealed
- Operating temperature range - 55 °C to + 155 °C
- Wide ohmic range from 10 Ω to 2M2 Ω
- Lead (Pb)-free and RoHS compliant

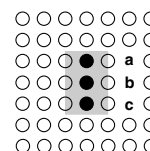


DIMENSIONS in millimeters (± 0.5 mm)

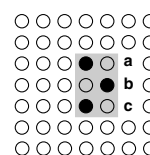
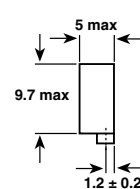
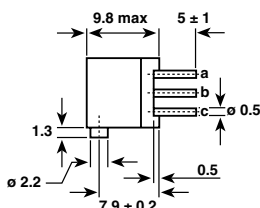
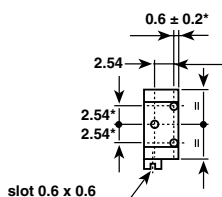
T9XA (PM81A) A



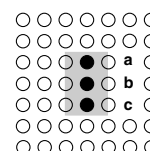
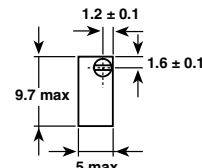
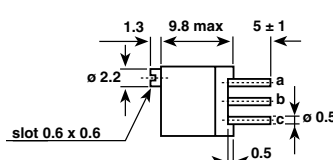
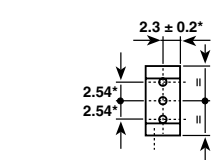
Terminal Spacing on a 2.54 PCB



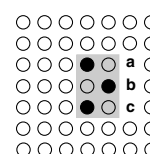
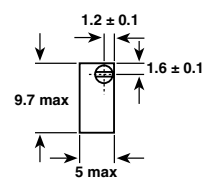
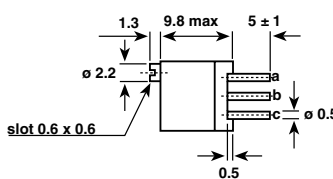
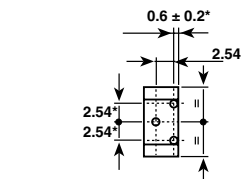
T9XB (PM81B) C



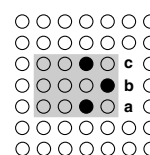
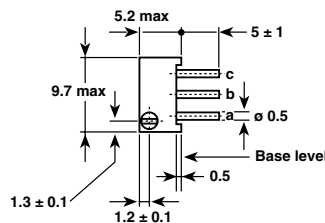
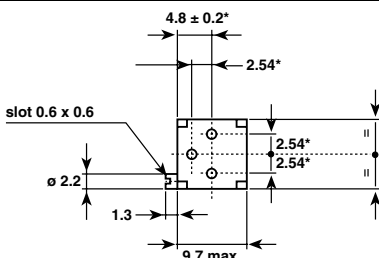
T9YA (PM82A) B



T9YB (PM82B) D



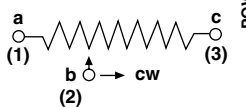
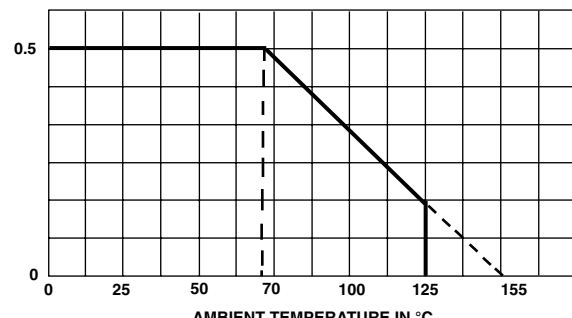
T9Z (PM83) E



Note

* to be measured at base level

 Undergoes European Quality Assurance System (CECC)

ELECTRICAL SPECIFICATIONS	
Resistive Element	Cermet
Electrical Travel	21 turns $\pm$ 2
Resistance Range	10 Ω to 2.2 M Ω
Standard Series E3	1 - 2.2 - 4.7 and on request 1 - 2 - 5
Tolerance	standard 10 %
	on request 5 %
Power Rating	linear 0.5 W at + 70 °C
	logarithmic not applicable
	CIRCUIT DIAGRAM  
Temperature Coefficient	see Standard Resistance Element Table
Limiting Element Voltage (Linear Law)	250 V
Contact Resistance Variation	2 % R _n or 1 Ω
End Resistance (Typical)	1 Ω
Dielectric Strength (RMS)	1000 V
Insulation Resistance (500 VDC)	10 ⁶ M Ω

MECHANICAL SPECIFICATIONS	
Mechanical Travel	23 turns $\pm$ 5
Operating Torque (Max. Ncm)	1.5
End Stop Torque	Clutch action
Net Weight	Approx. 0.82 g
Wiper (Actual Travel)	Positioned at approx. 50 %

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 55 °C to + 155 °C
Climatic Category	55/125/56
Sealing	Fully sealed - Container IP67

STANDARD RESISTANCE ELEMENT DATA

STANDARD RESISTANCE VALUES	LINEAR LAW			TYPICAL TCR - 55 °C + 125 °C
	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. CUR. THROUGH WIPER	
Ω	W	V	mA	ppm/°C
10	0.5	2.2	224	± 100
22	↓	3.3	150	
47		4.8	103	
100		7	70	
220		10.5	47	
470		15.3	32	
1K		22.4	22	
2.2K		33.2	15	
4.7K		48.5	10	
10K		70.7	7	
22K		105	4.8	
47K		153	3.2	
100K	0.5	224	2.2	
220K	0.28	250	1.1	
470K	0.13	250	0.53	
1M	0.06	250	0.25	
2.2M	0.028	250	0.11	

MARKING

Printed:

- VISHAY trademark
- Model
- Style
- Ohmic value (in Ω , k Ω , M Ω)
- Tolerance (in %)
- Manufacturing date
- Marking of terminal C

PACKAGING

- In magazine pack by 50 pieces (tube) code TU50

3/8" Square Multi-Turn Fully Sealed Container
Cermet Trimmers

Vishay Sfernice

PERFORMANCES					
CECC 41100		REQUIREMENTS		TYPICAL VALUES AND DRIFTS	
TESTS	CONDITIONS	$\Delta R_T/R_T$ (%)	$\Delta R_{1-2}/R_{1-2}$ (%)	$\Delta R_T/R_T$ (%)	$\Delta R_{1-2}/R_{1-2}$ (%)
Climatic Sequence	Phase A dry heat 125 °C Phase B damp heat Phase C cold - 55 °C Phase D damp heat 5 cycles	± 2 %	± 3 %	± 0.5 %	± 1 %
Long Term Damp Heat	56 days 40 °C, 93 % RH	± 2 % Dielectric strength: 700 V Insulation resistance: > 100 MΩ	± 3 %	± 0.5 % Dielectric strength: 1000 V Insulation resistance: > 10 ⁴ MΩ	± 1 %
Rotational Life	200 cycles	± 2 % Contact res. variation: < 3 % R _n	-	± 2 % Contact res. variation: < 1 % R _n	-
Load Life	1000 h at rated power 90°/30° - ambient temp. 70 °C	± 2 % Contact res. variation: < 3 % R _n	± 3 %	± 1 % Contact res. variation: < 1 % R _n	± 2 %
Rapid Temperature Change	5 cycles - 55 °C to + 125 °C	± 1.5 %	$\Delta V_{1-2}/\Delta V_{1-3}$ ± 1 %	± 0.5 %	$\Delta V_{1-2}/\Delta V_{1-3}$ < ± 1 %
Shocks	50 g at 11 ms 3 successive shocks in 3 directions	± 1 %	± 2 %	± 0.1 %	± 0.2 %
Vibrations	10 to 55 Hz 0.75 mm or 10 g during 6 h	± 1 %	$\Delta V_{1-2}/\Delta V_{1-3}$ ± 2 %	± 0.1 %	$\Delta V_{1-2}/\Delta V_{1-3}$ < ± 0.2 %

SAP ORDERING INFORMATION (Part Number 15 digits)																											
T		9		X		A		4		7		4		K		T		2		0							
MODEL				STYLE				OHMIC VALUE				TOLERANCE				PACKAGING				SPECIAL NUMBER							
				XA XB YA YB Z				From 10 Ω to 2.2 MΩ 474 = 470 kΩ				K = 10 % on request J = 5 %				T20 = Tube 50 pieces				(if applicable) Given by VISHAY for custom design							

PART NUMBER DESCRIPTION (for information only)							
T9	XA	470K	± 10 %		TU		e3
MODEL	STYLE	VALUE	TOLERANCE	SPECIAL	PACKAGING	SPECIAL	LEAD (Pb)-FREE



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